

REMARKS

This amendment responds to the office action mailed April 1, 2002. In the office action the Examiner:

- objected to claim 11 for containing informalities;
- objected to the specification for failing to provide proper antecedent basis for the claimed subject matter;
- rejected claims 13-18 under 35 U.S.C. §101 as being directed to non-statutory subject matter;
- rejected claims 1-3, 8-9 and 13-14 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over U.S. Patent No. 6,163,789 in view of Tran et. al. (U.S. Patent No. 6,359,987) and further in view of Lane et. al. (U.S. Patent No. 5,737,254).

After entry of this amendment, the pending claims are: claims 1-18.

Objections to the Specification

The Examiner objected to the specification for failing to provide proper antecedent basis for the subject matter of claims 13-18. The applicant has amended claims 13-18 and as amended, the claims are supported by the specification.

Rejections under 35 U.S.C. §101

The Examiner rejected claims 13-18 as being directed to non-statutory subject matter. The applicant has amended claims 13-18 and believes that the amended claims comply with 35 U.S.C. §101.

Double Patenting Rejection

The Examiner rejected claims 1-3, 8-9, 13-14 as being obvious over claims 1,4-6 and 10 of U.S. Patent No. 6,163,789 ('789 patent) in view of Tran and further in view of Lane.

With regard to claim 1, the Examiner rejected claim 1 as being unpatentable over claim 1 of the '789 patent in view of Tran and Lane. The applicant respectfully traverses the rejection.

A double patenting rejection of the obviousness-type is "analogous to the non-obviousness requirement of 35 U.S.C. 103." *In re Braithwaite*, 154 USPQ 29 (CCPA 1967). Therefore, any analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. §103 obviousness determination. *In re Braat*, 19 USPQ2d 1289 (Fed. Cir. 1991).

When rejecting claims under 35 U.S.C. §103, the Examiner bears the burden of establishing a *prima facie* case of obviousness. *In re Bell*, 26 USPQ2d 1529 (Fed. Cir. 1993). To establish a *prima facie* case, the reference, or references when combined, must teach or suggest each and every limitation of the claimed invention. Furthermore, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. MPEP 706.02(j). The suggestion or teaching to make the claimed invention must be found in the prior art and not in the applicant's disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

Here, claim 1 of the '789 patent does not contain each and every limitation of claim 1 of the present invention. Claim 1 of the '789 patent is directed to determining a value of a tuning coefficient based on whether the equalizer is to cut or boost the input signal. And then, using the determined value to realize the equalizer where the output signal has a substantially symmetrical cut and boost spectra. Claim 1 of the present invention is directed to determining a speaker type, selecting a set of coefficients based on the speaker type and producing an output signal from the selected

coefficients. As the Examiner herself stated, Claim 1 of the '789 patent does not disclose determining a speaker type or selecting a set of coefficients based on the speaker type.

Tran discloses a detector for determining whether a speaker connected to a computer system is an amplifying or non-amplifying speaker and then executing a set of instructions based on the speaker type detected. The Applicant agrees with the Examiner that Tran discloses detecting a speaker type. However, Tran does not disclose selecting a set of filter coefficients based on the speaker type. Nor does Tran disclose realizing an equalizer from the selected coefficients. In fact, Tran only teaches how to distinguish between actively driven and passively driven speakers, and does not teach how to make any other types of speaker type determinations.

Thus, there is at least one limitation (of pending Claim 1) that is not found in the claims of the '789 patent and that is also not taught by Tran: selecting a set of filter coefficients based on the detected type of speaker connected to a computer.

Finally, in Lane, the data processing system calculates filter coefficients based on filter control parameters provided by a user. The system then implements a single stage filter based on the filter coefficients and filters the input data to produce output data that is symmetrical about the unity gain line. Lane, however, does not disclose determining a speaker type and does not disclose selecting a set of filter coefficients based on the speaker type. Thus, neither Tran nor Lane discloses the concept of detecting a speaker type and then using the speaker type to select a set of filter coefficients. In fact, this concept or combination of elements is not found in any of '789, Tran and Lane. As a result, pending Claim 1 is not made obvious by the combined teachings of '789 (claims), Tran and Lane.

Additionally, nothing in the '789 patent, the Tran patent or the Lane patent suggests combining these references in the manner suggested by the Examiner, because none of the references cited, alone or in combination, suggest selecting a set of coefficients based on the speaker type, which is determined by the computer system (as opposed to the speaker type being known in advance or being specified by a user).

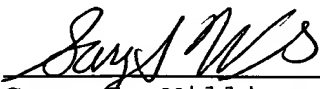
In conclusion, the '789 patent, the Tran patent and the Lane patent disclose determining a speaker type and realizing an equalizer using filter coefficients. However, none of the references, either alone or in combination disclose selecting a set of coefficients based on the speaker type. Therefore, in view of the above, Claim 1 of the present invention is patentable over the '789, Tran and Lane patents.

Independent claims 8 and 13 and dependent claims 2-7, 9-11 and 14-18 are patentable for at least the same reasons as claim 1 of the present invention.

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney if a telephone call could help resolve any remaining items.

Respectfully submitted,

PENNIE & EDMONDS LLP

By 
Gary S. Williams
Reg. No. 31,066

3300 Hillview Avenue
Palo Alto, CA 94304
Telephone: (650) 849-7721



Appendix B
Changes to the Claims

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The rewritten claims were revised as follows:

11. (amended) The method of claim 10 wherein step f comprises the substeps of:

f1) determining whether a first combined cut/boost of the first equalizer band and the second equalizer band is too great;

f2) determining whether a second combined cut/boost of the second equalizer band and the third equalizer band is too great; and

f3) determining whether a third combined cut/boost of the first equalizer band and the third equalizer band is too great.

13. (amended) [A method of transferring data over a network, the method comprising the steps of: transmitting from a first computer on the network to a second computer on the network a set of electronic signals defining] A computer program product for use in conjunction with a computer system, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising one or more modules to improve audio quality of the [second] computer [performed on the second computer] system, the one or more modules including:

a first set of instructions to determine a type of a Universal Serial Bus (USB) speaker of the computer system;

a second set of instructions to select a set of filter coefficients for a digital filter based upon the type of the USB speaker; and

a third set of instructions to realize a parametric equalizer using a digital filter, the digital filter producing an output signal to be input to the USB speaker from the set of filter coefficients and an input signal.

1 14. (amended) [A method] The computer program product of
2 claim 13 wherein the second set of instructions further
3 include:

4 a fourth set of instructions to receive equalizer
5 parameters; and

6 a fifth set of instructions to calculate the set of
7 filter coefficients from the equalizer parameters if received
8 without regard to the type of the speaker.

1 15. (amended) The [method] computer program product of
2 claim 14 wherein the third set of instructions comprise:

3 a seventh set of instructions to realize a first
4 equalizer band of the parametric equalizer, the first
5 equalizer band having a first cut/boost parameter;

6 an eighth set of instructions to realize a second
7 equalizer band of the parametric equalizer, the second
8 equalizer band having a second cut/boost parameter; and

9 a ninth set of instructions to realize a third equalizer
10 band of the parametric equalizer, the third equalizer band
11 having a third cut/boost parameter.

1 16. (amended) The [method] computer program product of
2 claim 15 wherein a tenth set of instructions for insuring a
3 first combined cut/boost of the first, second and third
4 equalizer bands is not too great.

1 17. (amended) The [method] computer program product of
2 claim 16 wherein the tenth set of instructions comprise:

3 an eleventh set of instructions to determine whether a
4 second combined cut/boost of the first equalizer band and the
5 second equalizer band is too great;

6 a twelfth set of instructions to determine whether a
7 third combined cut/boost of the second equalizer band and the
8 third equalizer band is too great; and

9 a thirteenth set of instructions to determine whether a
10 fourth combined cut/boost of the first equalizer band and the
11 third equalizer band is too great.

1 18. (amended) The [method] computer program product of
2 claim 17 wherein:

3 the eleventh set of instructions uses a relationship for
4 adjacent bands to determine whether the second combined
5 cut/boost is too great;

6 the twelfth set of instructions uses the relationship for
7 adjacent bands to determine whether the third combined
8 cut/boost is too great; and

9 the thirteenth set of instructions uses a relationship
10 for non-adjacent bands to determine whether the fourth
11 combined cut/boost is too great.